



MASTER MAGNETS OVERBAND SEPARATOR



Master Magnets range of permanent and electro overband magnets is one of the widest available. They are used for the continual and safe removal of tramp metal from conveyor lines, vibratory feeders and chutes.

In mining, quarrying, recycling and allied industries overbands remove metal contamination from a product stream, upgrading the quality of the final product and protecting processing equipment.

Overband Magnets can be installed in-line or across the feed line and are used where a high level of contamination is expected and a self cleaning device is required.

The principle of operation is relatively simple: The overband magnet is suspended above the feed line. As tramp metal passes under the magnet, it is lifted out of the product feed, and then swept out of the magnetic field to a discharge point by the cleated overband magnets. Depending on the application, permanent or electro magnets can be utilised.

www.mastermagnets.com

PERMANENT OVERBAND SEPARATORS

Type K

The Master Mag Type K overband separator is an economic and highly versatile alternative to more expensive electro magnet separators. Master Magnets pioneered the permanent overband separator specifically for the removal of steel rebar from crushed concrete back in the 1980's.

With a permanent magnet block, the separator is considerably lighter and more compact than electro magnets and requires no power source to the magnet, saving on cost and cabling. The permanent magnetic block is non-deteriorating and barring mistreatment, will have an unlimited operating life. It is designed to be virtually maintenance free and is available with either electric or hydraulic drives.



The Type K self cleaning magnet is mainly used in the quarrying and recycling applications where it can be positioned either inline over the head pulley or across a conveyor belt. It is designed to be virtually maintenance free and is available in either electric or hydraulic drive. It is the most popular product in the Master Magnets range for the removal of ferrous contamination.

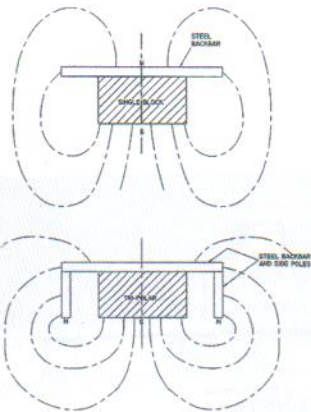
Master Magnets supply overband magnets to operate over conveyor belts up to 2 meters wide. They can be custom designed to suit the application and additional support structures can also be custom designed and manufactured.



If the operating gap is 300mm or higher, the Type K incorporates a Tri-polar design as standard. The tri-polar design utilizes massive steel side members to effectively give three poles across the bottom face of the magnet, intensifying the field in the centre of the magnet block. Master Magnets also recommend a tri Polar design for operating heights below 300mm, where there is need to separate small ferrous contaminates such as nails and screws.

The Tri Polar Advantages;

- Prevents magnetic leakage
- Produces a cleaner frame
- Achieves a better extraction
- Reduces belt damage



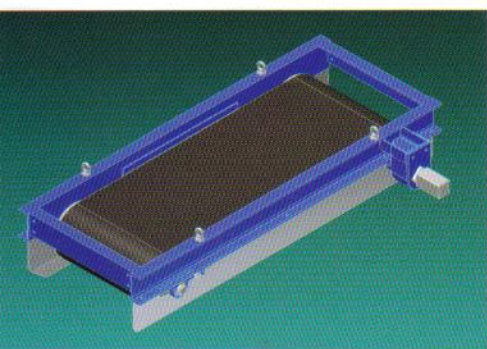
Type R

The Type R Overband Separator is the latest type of overband in the Master Magnets product range, designed using the latest CAD software, knowledge and expertise. It was developed for recycling operations to separate larger pieces of ferrous contamination from oversize material.

The Type R uses a single pole magnet, benefiting from a reduced magnet block size but retains the Master Magnets high quality and separation efficiency.

This development will provide a client with:

- Economical means of separating ferrous from waste materials
- A separator that is lighter in weight
- A more compact separator



ELECTRO OVERBAND SEPARATORS

Electro Overbands

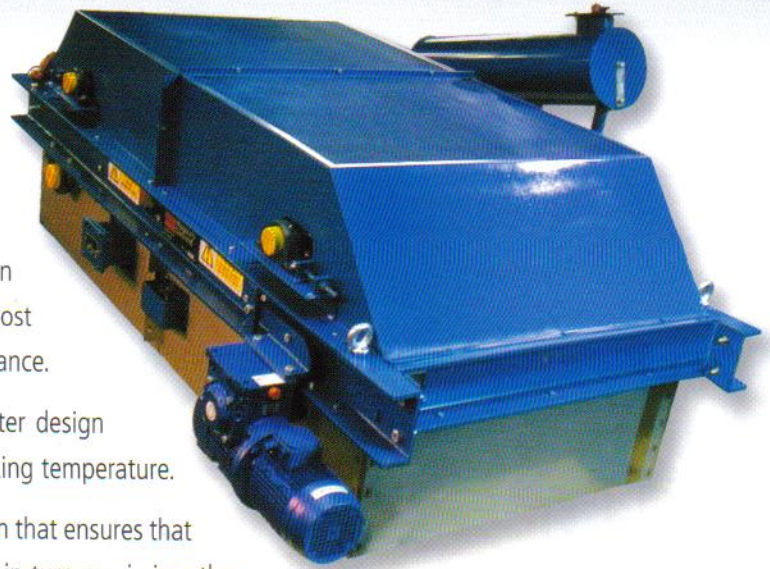
Electro magnetic overbands are normally used at greater operating gaps where the magnetic strength required can not be achieved by permanent magnets. They can also be used at lower gaps where there is a requirement to de-energise the magnet or a specific extraction is called for. Magnet selection takes into account full application parameters, including extractions. This ensures that the most economical design is proposed to meet the required performance.

The magnet can be air or oil cooled, in both cases computer design techniques ensure that the coil remains at its optimum working temperature.

All of our oil cooled magnets benefit from a special coil design that ensures that the cooling medium reaches all areas of the winding which in turn maximises the life and efficiency of the coil.

Specific designs are available to cope with continuous operation in high ambient temperatures. Coils are wound in nomex covered aluminium around high permeability steel cores and are encased in substantial steel fabrications. The casing design takes into account structural and magnetic design factors to ensure the field is concentrated in the working area of the magnet.

The overband framework is of heavy duty construction and uses high quality bearings and conveyor belting to give a long and reliable operating life. Purpose designed suspension mountings make site installation simple and straightforward.



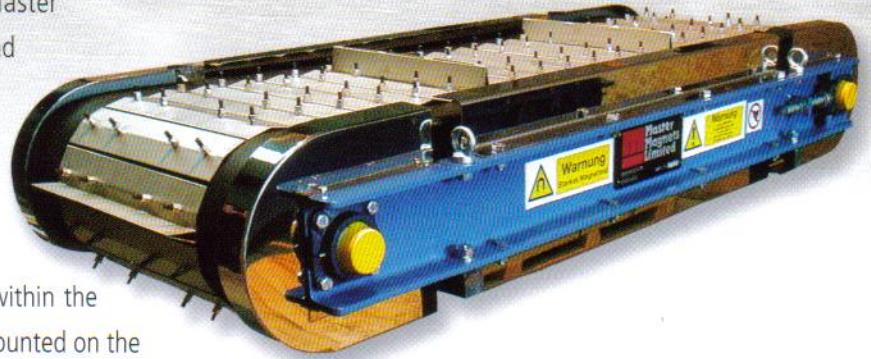
HEAVY DUTY OVERBAND SEPARATORS

SCB

The SCB series has been developed by Master Magnets as an up rated permanent overband separator. The SCB incorporates many features that are similar to the Type K design, such as tri-polar magnetic circuitry.

The design has specifically taken into account ease of belt change. The Magnet block is fixed within the structure of the framework and the pulleys are mounted on the extremities of the frame. Belt removal is achieved by simply removing guards and slackening its tension screws which allows the belt to slide off. Fitting a new belt is a simple reversal of this process: a new endless belt is placed over the framework of the magnet and tightened. This reduces downtime significantly during maintenance.

Where the SCB is required to handle hot or abrasive materials, for additional protection it features an optional armour clad belt. Constructed from individually replaceable stainless steel plates, the armoured covering increases the operational life of the belt and reduces damage to the magnet system base. Drive motor and other component parts have also been up rated and re-designed for an increased service life and reliability.



Availability

Master Magnets hold in stock Overband Separators ready for a next day delivery. Only common sizes and models will be held in stock, so please contact the Master Magnets Sales team to check stock availability. More uncommon sizes and bespoke designs can still be produced on short delivery periods.

Master Magnets is now listing current stock items online. Updated weekly, the site shows items available and ready for despatch – with many more stock items coming on stream throughout 2008. Please check website for latest availability.



Master Magnets have over thirty years experience providing innovative magnetic solutions to industries involved in recycling, demolition and reclamation, mining and quarrying, food processing, ceramics production and powders and minerals processing. The MasterMag range of systems are known for high performance and reliable operations including magnetic separators for metals reclamation, tramp metal protection and high intensity mineral separation.

Please visit our Website at www.mastermagnets.com to view the entire range of Master Magnets Equipment where brochure and video downloads are available.

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